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ABSTRACT

Conditions in Kenya and Poland concerning the labor market and educational preparation for jobs are discussed, along with public policy. In the decade of the 1980s, both nations reached saturation in the labor market and underwent changes in the demand for university-trained workers. Kenya needed highly trained personnel to replace expatriates following the end of colonization. Poland needed highly trained personnel in its change to a socialistic, industrialized nation. Within the last decade both nations have met that need, but in the meantime universities in both nations have continued to pour forth graduates who have continued to find employment (usually within the government) but not always at the level for which they were trained. One alternative to the policy of both Kenya and Poland of absorbing university graduates is to permit market forces to operate. It is suggested that trying to plan for higher education on the basis of labor needs has serious limitations. Opportunity is needed to allow youth, education leaders, and government officials to change direction in response to unpredictable market changes. (SW)

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MATCHING SUPPLY WITH DEMAND: HIGHER EDUCATION AND THE LABOR MARKET

A Comparison of Kenya and Poland

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While university professors may not always admit it, part of what they do prepares the students who sit before them for a job after graduation. Whether the course deals with the Odyssey of Homer or the building of bridges, the subject matter will have on-the-job relevance for the students. In the one case students obtain an exposure to classical literature which its advocates will insist aids them to become better thinkers, better decision-makers. In the other case students who will someday build bridges learn what they must consider when making decisions about such an undertaking.

In the United States and many other nations, student decisions about the choice of a major field of study and an eventual career will often reflect changes occurring in the availability of jobs for college and university graduates. In good times when jobs are plentiful, students enjoy the luxury of postponing job decisions while they undertake activities that interest them but don't necessarily have any immediate job implications. Such was the case with American students during the 1960s. In bad times when jobs are not plentiful, on the other hand, students take their decisions more seriously and flock to subject matters they believe will provide the best access to whatever jobs are available. Governments, which play critical roles in the financing of higher education and which will often develop policies aimed at attracting students to fields important to the nation's future, have a difficult time adjusting to these changes in student decision making.

One might question why we have chosen such disparate nations for our comparison. They are on two very different and separate continents, have different histories, and operate under different government systems. Yet Kenya and Poland since World War II have shared good times and bad in

trying to match the productivity of their higher institutions with the needs of the nation. Until the present decade, both nations absorbed their university graduates with little difficulty. Kenya was adjusting to its post-colonial period of independence and needed many highly educated people for the task. Poland was adjusting to socialism and a change in its economic focus from agriculture to industry. Such changes required highly educated personnel, especially in economics and engineering.

In the decade of the eighties, however, both nations reached saturation in the labor market, and new decisions required making. Should they continue as they have in the past? If they do, how do they reconcile such policies with the difficult economic situations in which both find themselves? Do they change their policies? If so, what directions should those policies take? How do the two nations compare in their answers to these questions? What might each learn from the other? Answers to these questions -- however disparate the examples of Kenya and Poland may be -- provide insights valuable not only to leaders in Kenya and Poland but to others as well. Perhaps their very disparity will help in the search for this insight, which every nation needs because every nation goes through the cycles described above. In the pages that follow we shall be looking for that insight.

Kenya

After more than a century of colonial influence [1] , the people of Kenya gained their independence from Great Britain in 1963. Aware of the need to replace former colonial officials with Kenyans and to give vigor to their economy, the Kenyan government looked to the University of Nairobi as a primary vehicle for providing the manpower necessary toachieve those

ends. Despite limited resources, Kenyans made a tremendous commitment to the provision of educational opportuity. By 1972 nearly 27 percent of the recurrent government expenditure was for education (Vandemoortele, 1984, p. 85), a figure which currently amounts to over 30 percent (Economic Survey 1985, 1985, p.76).

This growth in budgetary support was paralleled by growth of the educational system at all levels. During the period 1961-1975, for example, government-aided secondary school enrollment rose from 18,400 to 106,300 (Gachathi, 1976) [2]. Between 1961 and 1984 the total number of Kenyans graduating from university in East Africa grew from 99 to over 2,750. In addition, it was estimated that by 1983 over 9,000 Kenyans were studying abroad (Development Plan 1984-1988, 1983, p.380). These increases, it goes without saying, resulted in a dramatic increase in the supply of educated manpower.

During most of the first two decades following independence, Kenya managed to absorb its university graduates, usually into work in keeping with their university training. Much of this demand stemmed from the replacement of expatriates. As can be seen from Table I, however, by the end of the 70s Kenyanization could no longer be considered a source of significant employment gains for indigenous laborers.

TABLE I

DECLINE IN EXPATRIATE PRESENCE IN THE KENYAN SUPPLY OF MIDDLE AND HIGH-LEVEL MANPOWER

	1979	1977	1970	1968
Middle and High-level Expatriate Manpower	7,069	10,814	31,255	26,335
Total Middle and High-level Manpower (includes teachers)	142,045	144,093	113,294	90,829
Percentage Expatriates to Total	5%	7.5%	27.6%	29%

Source: Republic of Kenya, 1969, 1971, 1980.

Throughout this period, university graduates were predominantly employed in the public sector. This is a trend that has continued since first noted by Rastad (1972) in his study of the employment of the 1956-67 graduates of the University of East Africa. With the exception of engineering graduates, less than one in six was employed by the private sector. A tracer study by Hughes (1985, p.7), that examined the post-graduation experiences of a sample of University of Nairobi students drawn from the years 1970, 1975, 1979, and 1983, found that the private sector accounted for between 16.1 and 34.1 percent of the current employment of the four cohorts. This is far less than the 52 percent of the total wage employment in Kenya that was accounted for by the private sector (Economic Survey 1985, 1985, p. 43).

Changes in the Labor Market: The inability of the Kenyan private sector to absorb sufficient numbers of graduates can be explained, in large part, by the following. First, the Kenyan private sector had grown at a rate less than one-third of the rate at which the University of Nairobi had expanded over the same 15-year period. In addition, the high-level technical skills,

as possessed by the university graduates, were not needed by Kenyan industry. This results from the "predominance of import-substituting industries which have relied on the direct importation of foreign technology which generally requires only a relatively small cadre of engineering manpower to maintain" (Bennell, 1981, p.11). Few private sector industries were willing to try to accommodate the high salary and job satisfaction needs of university leavers when people with less training could be substituted [3]. As a result of the limited employment generation of the private sector, the government was under tremendous pressure to expand employment. By 1979, over 80 percent of University of Nairobi graduates found their first jobs in the public sector (Hughes, 1985, p.7).

Characterized by the rapid expansion of the supply of manpower and the inadequate growth of demand in the first two decades following independence, the labor market for the highly-trained had become intensely competitive by the 1980s. Until the end of the 70s, however, the replacement of expatriate labor and the growth of government services had maintained a sufficiently high level of demand to absorb the products of the raipdly expanding school system. Similarly, the experiences of the first three cohorts in Hughes's study (1986) suggested that graduates representing a wide variety of family backgrounds gained employment immediately following graduation and steadily served in positions of greater responsibility.

TABLE II

LENGTH OF TIME BETWEEN GRADUATION AND FIRST JOB

YEAR	Length of Time Before First Job			
	0-2 months	3-6 months	7-12 months	1-3 years
1983	22.7%	34.0%	34.0%	9.3%
1979	91.0	6.4	1.3	1.3
1975	84.3	10.0	1.4	4.3
1970	95.5	2.3	2.3	0.0

N = 294

By 1983 the situation had changed. Graduates surveyed in that year (Hughes, 1986) indicated that it had taken them much longer to find positions and that the positions that they eventually secured frequently did not draw upon the learning they had obtained at the University. This is shown in Table II and Table III. Furthermore, when compared with the experience of the 1979 graduates in the sample, the proportion doubled to 29.2 percent. Many in the group accepted teaching positions, frequently in outlying parts of the country [4], rather than wait longer for positions in their field. One 1983 graduate commented, "As regards to my current job, it's not challenging but because of lack of other openings, I stick to it." Another observed:

> . . . although I learned a lot at the University, very little of it; if any is being used by me in my current job. But, then I am earning a salary and I will continue doing this kind of work until Iget a more suitable one [job]. (Letter of May, 1985)

TABLE III

UTILIZATION OF KNOWLEDGE ACQUIRED AT THE UNIVERSITY OF NAIROBI IN THE FIRST JOB

Year of Graduation	Percentage of Knowledge Used (1st Job) 0 - 50%	50 - 100%	Total
1983	80.4	19.6	100.0%
1979	57.7	42.3	100.0
1975	59.2	40.8	100.0
1970	64.4	35.6	100.0

N = 294

Despite the relatively depressed labor market, graduates showed a reluctance to pursue self-employment [5]. Instead, Kenyan graduates seemed to conceive of success in tems of gaining security. They were content to wait for the government to provide employment even though the position would underutilize their skills. This fits with Barkan's (1971) observations about Kenyan university students: "Students are careerists . . . not willing to risk all they have gained for the few additonal rewards and satisfaction which a position of leadership might bring" (p.193).

By 1985 the pressures were building to unacceptable levels. The cost of continued educational expansion, particularly given the evidence of manpower inefficiencies at even the highest level of training, is untenable. Moreover, it is not reasonable for the government to continue to absorb those graduates, as the 1986 budget presentation in Kenya acknowledged:

> There is evidence that Government employment has expanded excessively. . . . As a result, we are not providing the Civil Service with the complementary resources it needs to be productive. . . . A continuation of the recent growth path of Government employment is a financial and even a mathematical impossibility. (Daily Nation, 1985, p.4)

Problems of Manpower Planning: The experience of Kenya underscores the weakness of manpower planning. The long pipeline of higher education, the vagaries of the economic climate in a country vulnerable to outside influence, unanticipated political agendas (e.g., expansion of educational opportunity, guaranteed employment for University graduates), and other such factors make it extremely difficult, if not impossible, to match the supply to the need for highly-trained manpower. Kenya is seemingly producing university graduates for which the nation has no apparent need.

This is obviously not a simple problem with simple solutions. Policy-makers, faced with this situation, are working to balance four key goals: national stability, fulfilling national manpower needs, improving equity, and making efficient use of scarce resources to achieve these needs. The rapid expansion of education at all levels, including the University of Nairobi, worked to fulfill all four goals in the years following independence. In recent years broad expansion can be no long understood in terms of the fulfillment of manpower needs or the efficient use of scarce resources.

Expansion can, however, continue to be understood in terms of national stability and the perception of open access to privilege. To curb the expansion is to say to the massive numbers of students pushing themselves up the educational pipeline that they have little hope of getting into the University of Nairobi -- of gaining access to society's economic rewards. King (1985) summarized the scenario:

> The colonial politics of educational scarcity and restriction are increasingly giving way to more open access systems. These systems are fueled by the assumption that open opportunity to compete via education

for the few good jobs is more equitable than shaping the educational pyramid to the pyramid of well-paid jobs. The popularity of this local assumption requires that there be little correspondence in size between the education and training system (the supply) and the wage and salary sector (the demand) (p.ii).

Graduates, their families, and all with hopes of reaping the rewards of education develop expectations with regard to the occupation of graduates (Foster, 1968; Maszrui, 1978). Families have committed scarce resources to education, and graduates have had to wage an uphill battle against immensely unfavorable odds in order to succeed. [6] The frustration that could potentially coalesce this group as a destabilizing force is a potent pressure upon the government. Policy makers, faced with inadequate employment generation by the private sector, have chosen to expand public sector employment.

The most important as well as the most obvious implication of this scenario is that at some point the government must interrupt what may be termed as an <u>educationary</u> spiral. The efficiency of expansion will have to supercede the equity implications of expansion. Equity may have to be addressed in ways other than highly-subsidized government expansion.

This cyclical educationary spiral has four components:

1) The demand for education (the primary cause of which is the desire for access to what is variously called the modern, the formal, or the wage sector of the economy);

2) The subsequent pressure to expand the educational system which, in turn, produces more graduates;

3) The subsequent pressure either to expand employment opportunities or to find other justifications for the continuing levels of support for education; and

4) The resulting reinforcement of the demand for education (by assuring that relatively high-paying jobs are available, or by identifying those outcomes of education having other than job-related importance).

Poland aiso faces an educationary spiral, but the conditions predicating solutions to the problem may have differentroots.

Poland

Higher education in Poland has over six hundred years of history and tradition. Demand for higher education has remained high throughout that history. After World War II Poland found itself under a different political system, in which government planning of the economy played a principal role. This system had an impact not only on higher education but on every other sector of the economy -- both micro and macro.

One problem endemic to many societies -- planned or otherwise -- confronts confronts Poland today. This problem involves matching the supply of graduates from institutions of higher education with needs within the labor market. In earlier decades the problem did not exist. During the first years after World War II, for example, the Polish economy seemed to have little difficulty absorbing graduates into the job market. Highly qualified specialists were needed to rebuild a Polish economy destroyed by the war. Meanwhile the nation was changing from a basically agricultural to a more industrialized economy. Once the reconstruction had occurred, however, Poland began experiencing difficulty in absorbing the numbers of

graduates its higher institutions had become capable of producing. A recent study done in Poland (Kluczynski and Sanyal, 1985) shows the greatest disproportion between supply and demand in the engineering profession. Why, in a centrally planned economy and after more than forty years of experience, might this situation have occurred?

Several answers are available for this question. Perhaps most importantly, one can question whether higher education exists simply or solely as a vehicle for meeting demands of the labor market. Many arguments are available along this line of reasoning, and Poland is not alone in holding to them. In the pages that follow we shall try to explain why Poland's higher education should not and cannot exist simply to provide highly qualified graduates equal to the demands of the labor market. Our reasons are four:

1) The history and traditions of Polish higher education go beyond the demands of the job market. Young Poles have always people aspired for this high level of education, and today's generations are no different from earlier ones.

2) Higher education plays a role in the nurturing and preserving of Polish national culture that goes beyond mere preparation for a job.

3) Long range planning aimed at providing for future needs in the job market has its limitations.

4) The structure of Polish higher education may lack the flexibility needed to adjust to changes in the job market.

We shall take each of these explanations in its turn. Two of the explanations are largely sociological in nature, the other two apply

largely to the economic system.

The impact of tradition: As mentioned above, Polish higher education has over six hundred years of tradition. This tradition has passed through centuries from generation to generation. Polish people separate the process of reaching the highest level of education from any political or economic considerations. Higher education is indeed stimulated by the economy, but that may or may not influence the decisions youth make when seeking higher education and the career that follows.

Higher education in Poland represents for those who aspire for it a higher level in society. Youth may not necessarily correlate it with employment or career opportunity. When the graduate of a Polish secondary school selects a subject of study in the university, he or she may not necessarily have considered future job opportunities. To be sure, it is good to become a doctor, a lawyer, an engineer, or a psychologist. Important, however, to their decision is not only the issue of future job opportunities but also the very real fact that through higher education youth can reach a higher level in society.

Nurturing and preserving Polish culture: Any system of education has its impact on the cultural development of a nation. The national culture gains through the education of its youth. Well-educated people work better, are better able to make decisions for themselves, and are more open to change and further education. Each member of the nation through his or her knowledge can contribute to the national culture and economy, even if the match between supply and demand in the labor market is not perfect.

As described by Kluczynski and Sanyal (1985, p.175), higher education

has a responsibility for the development of the Polish worker, whose employer should treat him or her (p. 175) "as an active, thinking person who wants to understand what he or she is doing rather than passively fulfil certain functions." Because they see Polish higher education as having a responsibility that goes beyond preparing students to fulfil a specific job, Kluczynski and Sanyal would put effort into preparing Polish youth to perform a wider range of activities important to the future of the Polish culture. They seek (p. 19) to "train people for life and action in society, to develop their own character, to make use of their own abilities." "Children and youth," Kluczynski and Sanyal continue (p. 22), "are not units of 'supply' for a level of 'demand.' Each of them is an individual human being, and the principal task of school is to prepare them to live their lives, not just their living." The demands of the modern Polish economy, the authors insist (p. 41), "are related to more personal qualities, such as the propensity to acquire new skills, to innovate, to adapt to the working environment, to think imaginatively, to take on responsibilities, to be involved affectively in the process and organization of work."

Problems of long range planning: In socialist Poland, the government has created additional opportunities for young people, mostly from blue collar and peasant families, to reach the university and other higher institutions. A system of points for students from these families facilitates their matriculation in higher education. The government created this point system in order to fill the gaps between the level of education in large cities and that in small villages and rural areas. All students must pass entrance exams, and once admitted they must succeed on their own, although they do have access to financial aid.

Young people from blue collar and peasant families who enter the university do not often continue to work in the fields of their parents. This is particularly true of youth from farm families. The big percentage of youth from blue collar and peasant families prepare for careers such as doctors or engineers. Each individual is free to make his or her own choice of subject matter studied. It often results that 15 or 20 people will become candidates for placement in departments of psychology, sociology, or law; and not enough candidates will seek entry to mathematics or agriculture. Not everyone can thus study what they wish. The limits created by economical rules established at the national level thus come into conflict with individual student aspirations.

Student aspirations are not the only source of difficulty. For the person who enters the educational system and proceeds to the end, the time required is 17 years. The planning period for higher education is eight to ten years and even longer for the labor market. Under these circumstances national planning becomes extremely difficult.

To meet the level of demand for qualified manpower in the labor market, decisions relative to higher education require making well in advance. Not only do student aspirations affect the equation, but it remains almost impossible to predict the demand that will be created by the job market for certain types of manpower. Technology changes so fast and often so unpredictably that the probability for this kind of prognosis is low.

Structural problems: Responding to these phenomena requires a more flexible educational structure than Poland now enjoys. University students complete a relatively prescribed four- or five-year course of study leading

to the Master of Science degree. Rarely are substitute courses available. Most students study full time, and they do not enter the job market until they have finished their studies. Evening and correspondence courses are available to those wanting to combine work and study, but the tendency (although changing) has been not to mix work and study.

As the quotes above from Kluczynski and Sanyal indicate, educational leaders in Poland are looking for a more open structure. They seek a system of coming and going, in and out, between education and work, a system responsive not alone to the job needs of workers but also to their sense of personal satisfaction. People may be happy with their jobs, but they will usually want more. They may indeed want to increase their level of knowledge in areas far removed from the job setting. Can they do this? Can the Polish economy accommodate it? Or is the goal unrealistic?

Answers to these questions do not come easily, but it would appear that future changes should go toward producing a more flexible structure, one in which short-term courses play a bigger role and where "students" move back and forth between the educational system and the world of work. Such changes would alter the ratio between daytime and evening courses and could lead to a larger population of working students in the university. Such changes would require new approaches to the methods and techniques of teaching. Such changes, finally, would make the system more sensitive to dynamic changes inherent to the labor market.

Summary and Conclusions

In this paper we have reviewed conditions in two admittedly disparate nations. Despite their differences, both nations in recent decades have

shared some common experiences. In the context of this paper they have gone through changes in the demand for university-trained manpower. Kenya needed highly trained personnel to replace expatriates following the end of colonization. Poland needed highly trained personnel in its change to a socialistic, industrialized nation. Within the last decade both nations have met that need, but in the meantime universities in both nations have continued to pour forth graduates, who have continued to find employment (usually within the government) but not always at the level for which they were trained.

Kenyan government officials have labeled as "impossible" the continuation of this situation. Polish educational leaders have pointed to outcomes not related to the job market which in their judgment justify the continuation of government support for education.

Neither nation can today lay claim to a healthy economy. Under the circumstances a government policy that focuses strictly on manpower needs might well be directed toward reducing funding for higher education. Indeed, a call has been heard throughout Africa that governments might better put their money into primary rather than higher education (Askin, 1987; Jiminez, Psacharopoulis, and Tan, 1986).

Yet to shut the door on aspirants for a higher education is not an easy thing for governments to do. Matriculation in the university holds the promise of a higher status in either society, and to frustrate those aspirations may not serve government well, especially if that government lacks stability. The example of Italy comes well to mind.

Governments in Kenya and Poland may very well therefore pursue other options. Polish leaders, when they consider more flexible structures for

the education of youth, may have found an option. That option warrants further exploration.

The governments of both Kenya and Poland have followed a policy of absorbing university graduates, whether it needed them or not. Where else, one might ask , might those graduates go? In the case of Kenya, the private sector has not grown as it might, and university graduates appear reluctant to take their chances in that sector. In Poland, agriculture remains predominantly private, and the service sector remains open to private enterprise. Opportunities thus do exist outside of government.

Perhaps the healthiest outcome for both nations would be for them, to the extent that their systems permit it, to allow market conditions to influence the aspirations of their youth. Rather than absorbing graduates by making jobs in government for which the demand may not exist, governments might permit the market to control the situation to a greater degree. Aware that the government was not going to create jobs in given fields, youth would move away from those jobs toward those where the market did indicate a need. By paying technicians more than engineers, for instance, Poland has attracted people away from engineering and toward technology. Kenya needs more teachers, especially outside its major cities. If those positions paid better than the government positions into which students now go, more youth might prepare themselves for teaching.

Perhaps most revealing in this comparison is the realization anew that trying to plan for higher education on the basis of manpower needs has serious limitations. Youth, educational leaders, and government leaders all need maximum flexibility in finding the right match; opportunity is needed for all three groups to change direction in response to unpredictable

market changes. This need for flexibility makes suspect most governmental planning as it relates to education. The alternative of permitting market forces to operate therefore becomes more attractive (Clark, 1983).

Also more attractive is the recognition that a nation that supports education derives more than trained workers from the effort. National leaders throughout the world today are turning to their educational systems as the vehicle for meeting the "competition" of rival nations. To the extent that these leaders limit their view of competition to the production of trained workers, they should not expect necessarily to become as competitive as they might hope. The lessons of Kenya and Poland make that abundantly clear. To the extent, on the other hand, that governmental leaders recognize the benefits other than job training that go to a society whose members have received a higher education, then will that nation become truly "competitive." It will have established a human reservoir of people more open to change, better able to make decisions, better able to participate in achieving that competitive edge for which all nations today strive.

Notes

[1] Until the 19th century there was little penetration of the interior of East Africa by Arabic or European outsiders. It was not until 1895 that Kenya was made a Protectorate of the British Government. In the first decade of the 20th century a railroad was constructed from the coast to Lake Victoria that signaled the beginning of an era of significant expatriate presence which was to last well into the first decade of independence.

[2] During this same period, Harambee secondary school enrollment increased from 3,700 to 111,100. Harambee schools are community-funded, generally lower quality schools that have filled a critical void in the supply of educational opportunity in Kenya.

[3] both Bennell (1981) and Matthews (1985) address the reluctance of employers to hire University graduates because of the difficulties caused by the graduates' high expectations.

[4] The vast majority of graduates from all years studied have found employment in Nairobi. The proportion, however, has been gradually diminishing:

Year	Graduates with Jobs in Nairobi	Graduates with Jobs in Kenya outside Nairobi	N
1983	60%	40%	98
1979	64	36	100
1975	77	23	92
1970	85	15	65

[5] Out of 321 graduates, only three classified themselves as being self-employed.

[6] The probability of getting into the University of Nairobi if you are in the final year of primary school (Standard VII) is only .4 of one percent.

[7] Salary differentials, according to Vandemoortele (1984a, p. 17), have already begun to narrow in Kenya. The average salary of workers employed at the director or general manager level has dropped from 11.8 times the wage of an unskilled laborer in 1972 to 7.9 times the wage of an unskilled laborer in 1982. For middle level executives and managerial personnel, wages have declined from 7.9 to 4.2 times the average wage of an unkilled laborer.

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